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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/20/2005

Kayo Kamei

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7590

06/29/2010

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EXAMINER

PRIMO, ALLISTER O

ART UNIT

PAPER NUMBER

2854

MAIL DATE

DELIVERY MODE

06/29/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,981	Applicant(s) KAMEI ET AL.	
	Examiner ALLISTER PRIMO	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3-7, 13-17, 19 and 22 is/are allowed.
- 6) ☒ Claim(s) 9-12,18,20,21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9 -11, 18, 20, 21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida (US 7002702).

With respect to claim 9 Machida discloses in figures 1, 3 and 43 an image forming apparatus (104) in combination with a terminal machine (104), comprising: said image forming apparatus (105) comprising: a paper feed cassette (the paper feed cassette is a part of the printer 105 shown in figure 1 and required in order to store the sheet for the print request) configured to contain paper sheets; a paper sheet quantifier (a part of controller 17) configured to determine the number of paper sheets contained in the paper feed cassette (described in column 26 lines 43 – 64); an image forming portion (the image formation portion of the printer 105 that prints the image forming request received) configured to form an image on one or more of said paper sheets in response to an image forming request from said terminal machine; a control portion (17) configured to cause, in immediate response to said image forming request, said paper sheet quantifier to determine the number of paper sheets contained in the paper feed cassette: wherein said control portion is further configured to cause, if the number of

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paper sheets contained in the paper feed cassette is insufficient to complete an image forming job in response to said image forming request, and prior to commencement of said image forming job, the provision of a warning at said terminal machine (104) that the number of paper sheets contained in the paper feed cassette is insufficient to complete said image forming job (described in column 26 lines 43 – 64).

With respect to claim 10, the method is necessitated by the structure disclosed in claim 9 above. The structure disclosed by Masako as modified is capable of carrying out the recited functions.

With respect to claim 11, the method is necessitated by the structure disclosed in claim 9 above. The structure disclosed by Masko is capable of carrying out the recited functions. Examiner would like to point out that in order for a user to load sheets into the feed cassette the cassette must be placed in the uninstalled state (state in which the feed cassette is disengaged from the printer body, wherein the printing operation is unavailable). When the feed cassette is in the uninstalled state the image forming device will not be able to print, therefore the commencement of the print request is withheld.

With respect to claim 18, Masako as modified further discloses wherein said control portion is further configured to withhold commencement of said image forming job if the number of paper sheets contained in the paper feed cassette is insufficient to complete

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said image forming job in response to said image forming request (described in column 26 lines 43 – 64).

With respect to claim 20, Masako as modified further discloses wherein said image forming request is the result of a first work of a user at said terminal machine (104; Machida described in column 4 lines 5 – 10).

Examiner would like to point of that since a warning message appears before commencement of a first work when there are insufficient papers, then it must inherently appear before a second work since the second work happens after the first warning.

With respect to claim 21, Masako as modified further discloses wherein said image forming request is the result of a first work of a user at said terminal machine (104; Machida described in column 4 lines 5 – 10).

Examiner would like to point of that since a warning message appears before commencement of a first work when there are insufficient papers, then it must inherently appear before a second work since the second work happens after the first warning.

With respect to claim 23, the method is necessitated by the structure disclosed in claim 9 above. The structure disclosed by Masko is capable of carrying out the recited functions. Examiner would like to point out that when the paper cassette is driven to feed paper, the paper cassette is in an engaged state. When the paper cassette is not

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driven to feed the paper, the paper cassette is switched to a released state in the image forming apparatus.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masako and Machida as applied to claim 9 above, and further in view of Fukuda (JP 57-160844).

With respect to claim 12, Masako as modified discloses the claimed invention except wherein: said paper feed cassette comprises a movable paper storage board supporting said one or more paper sheets, wherein a position of the paper storage board is dependant upon the number of paper sheets contained in said paper feed cassette; wherein said paper sheet quantifier comprises a reflective optical sensor configured to detect a height of said paper storage board; wherein said reflective optical sensor comprises a light emitter and a light receiver; wherein said light emitter is configured to emit light to be reflected from said paper storage board to said light receiver.

Fukuda discloses in figure 2, a paper feed cassette comprises a movable paper storage board (2) supporting said one or more paper sheets, wherein a position of the paper storage board is dependant upon the number of paper sheets contained in said paper feed cassette; wherein said paper sheet quantifier comprises a reflective optical sensor configured to detect a height of said paper storage board, described in constitution section; wherein said reflective optical sensor comprises a light emitter (9) and a light receiver (10) ; wherein said light emitter (9) is configured to emit light to be reflected from said paper storage board (2) to said light receiver (10 describe in the constitution section).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the image forming apparatus disclosed by Masako as modified with the teaching of Fukuda for the purpose of digitally indicating the remaining amount of sheets.

Allowable Subject Matter

5. Claims 1, 3-7, 13-17, 19 and 22 allowed.

With respect to claim 1 the allowability resides in the overall structure of the device and at least in part , wherein the control means is configured to cause if the number of sheets of the recording medium stored in the paper feed cassette is lower than the number of sheets necessary to complete an image forming operation in accordance with the image forming request, the paper feed cassette to be pushed out from an

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installed state toward an uninstalled state by the push-out means without commencing the image forming operation.

With respect to claim 7 allowability resides in the overall structure of the device and at least in part wherein said image forming apparatus is further structured to withhold commencement of said image forming job if the number of paper sheets contained in the paper feed cassette is insufficient to complete said image forming job in response to said image forming request; and wherein said control portion is further configured to withhold said commencement of said image forming job by causing said paper feed cassette ejector to push out the paper feed cassette from an installed state toward an uninstalled state relative to the main body of the image forming apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLISTER PRIMO whose telephone number is (571)270-5069. The examiner can normally be reached on M - F 9 - 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy NGUYEN can be reached on (571) 272 - 2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AP

/Ren L Yan/
Primary Examiner, Art Unit 2854